

ABSTRACT OF THE DISCLOSURE

A magnetic pole of a magnetic field type lens is divided into a first magnetic pole section that is at ground potential, and a second magnetic pole section facing a sample and to which a negative high voltage is applied, the first magnetic pole section and the second magnetic pole section 212 being electrically insulated from each other, and an electric field type bi-potential lens is made up of an electrode attached to the first magnetic pole section so as to surround an electron beam path. High resolution observation with small chromatic aberration factor C_s , C_c is made possible without forming a positive high voltage section inside an electron beam path of a lens barrel.